

634-015

Dart Aerospace Ltd.

Date: Thursday, 23/10/2008 1:22:18 PM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SKID TUBE ASSEMBLY
Job Number : 42892A	
Estimate Number : 12520	
P.O. Number :	Part Number : D205634045
This Issue : 23/10/2008 S.O. No. :	Drawing Number : D2580 REV D
Prsht Rev. : NC	Project Number : N/A
First Issue : 11 Type : SKIDTUBES	Drawing Revision : D
Previous Run : 36766A	Material :
Written By :	Due Date : 01/02/2009 Qty: 1 Um: Each
Checked & Approved By : <u>2008.10.23</u>	
Comment : Est Rev:C Revised Steps 06-09-06 JLM Est Rev:D Added SS Wearplates & Gaskets 07-07-09 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

DC

DOCUMENT CONTROL

**Comment:** DOCUMENT CONTROL

Photocopy D205-634 bluefile & type labels per PPP D205-634-045 CHG002

N/A *JA*

2.0

D25001190

Ext'n -1" Beam Tube 4"

**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2500-1-190

Skid Tube Extrusion

*B37544**Job 8-11-12*

3.0

D2596

Web, 205 Skidtube

**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2596

205 Web

*B-43374**ANN 7-11-12*

4.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1

**Comment:** LANDING GEAR RESOURCE 1

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2580 if necessary Debur ends

3-Drill pilot holes using drill jig DT 8149

4-Acid etch and Alodine tube per QSI 005 4.1

7 Job 8-11-13

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #:

Machine Or Operation:

Description:

5-Open holes to 0.500" as per Dwg D2580 without cutting fluid

6-Countersink holes as per Dwg D2580 without cutting fluid

7-Deburr and blow out all chips from inside of tube

8-Add extra holes to web prior to bonding, per DEO 9183

9-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty	Part Number	Description	Batch
A/R	Sikaflex-291	17109	449
Sikaflex expire date:		4-11-30	
Start Time:		4:20	Date: 8-11-13
Fin Time:		8:00 AM	Date: 8-11-13

JB 8-11-13

5.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: BENDING MACHINE

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

SL 8-11-24

6.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr ends after cutting. Remove alodine from around holes

2-Drill extra fwd hole as per DEO 9183 using
drill jig DT8461

3-Drill extra middle hole as per DEO 9183 using
drill jig DT8462

4-Drill pilot holes for aft cap using DT8215, ***DO NOT OPEN TO FINISH SIZE***

5-Drill extra aft holes as per DEO 9183 using
drill jig DT8463 locating from aft cap hole and aft saddle hole.

JB 8-11-17



W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-045 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>42892A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>06-12-01</u>	<u>6.0</u>	<p>The aft holes per DEO 9183 are not as per drawing. Hole spacings are too close together by 0.060" - D.C. noticed @ 31.0</p> <p>R.C.: DTB463 is incorrect, i.e. tubes were not inspected as per drawing.</p> <p>* LACK OF ATTENTION</p>						

NOTE: Date & initial all entries

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Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #: Machine Or Operation: Description :

7.0

QC5

INSPECT WORK TO CURRENT STEP



[Signature]

Comment: INSPECT WORK TO CURRENT STEP

CE 08/11/18

8.0

D25763

Step (maching detail)



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2576-3	Step	<i>38372 CE 08/11/18</i>

9.0

D2579

Crossbolt Spacer



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
24	D2579	Spacers	<i>41666</i>

JD 8-11-17

10.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Prepare tube for welding D2576-3 Step Remove alodine as required.

JD 8-11-17

2-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R Aluminum Rod

m109613

CE 8-11-18

3-Weld crossbolt spacers D2579 as per Dwg. D2580 and QSI 004. For D2579

spacers, weld one

side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R Aluminum Rod

m109613

CE 8-11-18

4-Grind welds as per Dwg D2580 Grind flush ridge made from bending

5-Drill holes for wearplates using DT 8217 Open holes to 19/64", adjust stopper not to hit web. Deburr

6-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

*****DO NOT COUNTERBORE EXTRA HOLES PUT IN AT STEP 13,14 AND 15 (LEAVE AT 0.384"Ø AS PER DEO 9183)****

7-Open aft cap holes to #6 Drill bit. Deburr

8-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr




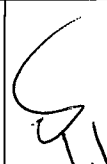




(Pb)

AWM 8-11-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-045 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: 42892A		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/11/20	# D-3	two welding pin holes were found during inspection 1- 1st ^{SADDLE} pin hole from row R hole (FWD)		Fill both holes with weld As per AS7007.				
		2- 4th saddle hole from row R hole (FWD) R.C. contamination difficult welding Tiny dust particle on surface		grind welds flush. Buff lightly to remove the tiny pin hole.	11 8/11-20			

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Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #: Machine Or Operation: Description :

11.0 QC10 VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 08/11/20 (X)

12.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/11/20 (X)

13.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1
Pressure wash as per QSI 005

M-L 08/11/26 (1X)

14.0 POWDER COATING POWDER COATING



Comment: POWDER COATING
Powder Coat ****GREEN****Sandtex (Ref: 4.3.5.8) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11:45
320 OF
12:15

M-L 08/12/15
M-L 08/11/26

15.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-12-16 (X)

16.0 D2855 Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Cap

Batch: 1335920

JH

17.0 AN35A Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Bolt

Batch: 11100188

JH

08-12-16 (X)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng				

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Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #:	Machine Or Operation:	Description :
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18.0	AN960JD10L	Washer
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Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Washer

Batch: M 105793

HL

19.0	AN960C10L	washer
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Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

washer

batch M 109798

HL

20.0	ALS71032130	Insert
------	-------------	--------



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Insert

Batch: M 105819

HL

*

21.0	AN3C4A	BOLT
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Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

BOLT

Batch: M 109798

HL

22.0	D356613	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch: 1342147

HL

23.0	D35665	Gasket
------	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch: 1341467

HL

24.0	D35661	Gasket
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Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

GASKET

Batch: 1343261

HL

08.12.16

HL

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #:	Machine Or Operation:	Description :
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25.0	D356413	Wearshoe
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B42257

JH

26.0	D356411	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B43192

JH

27.0	D35649	Wearshoe
------	--------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B42258

JH

28.0	D35645	Wearshoe
------	--------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: 43408

X

JH

29.0	D25943	O-Ring, 205 Skidtube
------	--------	----------------------



Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

O-Ring

Batch: B29908

JH

30.0	D25941	Plug, 205 Skidtube
------	--------	--------------------



Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

Plug

Batch: B42807

JH

31.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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(Pb)

Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearplates as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R

Sikaflex-291

M 109942

JH

06-12-26 11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-045 PAR #: N/A Fault Category: Prod/Sketch NCR: (Yes) No DQA: D Date: 08/12/19
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>42892A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
		* See last page for measures						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/12/19	#6-D	The aft holes per Dwg 9193 are not as per Dwg. hole spacing are too close by 0.080" NC noticed at step #31.	<i>[Signature]</i>	See NCR 08-116 - Friction City x4 0.5 x 0.115" with 4 0.080" x 45° chamfer out of 6061 T6 Bar M 10567L - Remove 2 aft x-bolt spacers.	<i>[Signature]</i> 08/12/11 ZE 08-12-09	<i>[Signature]</i> 08/12/11	<i>[Signature]</i>	<i>[Signature]</i> 9/12/09
	Final at step #310	RC Sig DT 8463 is incorrect and take were inspected + Lack of Attention + Missed at inspection	<i>[Signature]</i>	Weld 6061 Plug in place per AS2004 A/R 109560 Grinds weld Flush in size + out.	BE 08-12-09 ZE 08-12-09	<i>[Signature]</i> 08/12/11	<i>[Signature]</i>	<i>[Signature]</i> 9/12/19
			<i>[Signature]</i>	Mark out new hole location per Dwg. Drill and install new x-bolt spacers B# 41666 and weld in place Per AS2004. A/R M 109560	ZE 08-12-09 BE 08-12-10	<i>[Signature]</i> 08/12/11	<i>[Signature]</i>	

NOTE: Date & initial all entries

Bull/sand tube and re powder coat
Per AS2005

Date: Thursday, 23/10/2008 1:22:18 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42892A

Part Number: D205634045

Job Number:



Seq. #:

Machine Or Operation:

Description:

1 Sikaflex expire date: 09/10/07

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 M1109110

Sikaflex expire date: 09/07

08-12-16

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: M1109917

32.0

QC5

INSPECT WORK TO CURRENT STEP.



08/12/17



Comment: Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

33.0

PACKAGING 1

PACKAGING RESOURCE #1



17

Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-634-045

Location:

PPP Rev:

DDP 42892 8/12/18

SP

34.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/18

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



08/12-18

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

DART

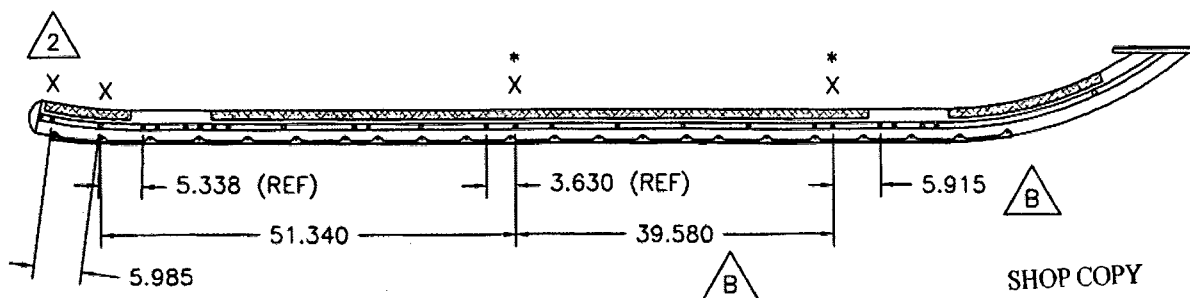
DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. DEO 9183	REV. B SHEET 1 OF 1
DATE 00.05.15		TITLE ADD SKIDTUBE P/N D2580-045	SCALE NTS
A	00.03.29	NEW ISSUE	
B	00.05.15	39.580 WAS 39.620	

DART ENGINEERING ORDER

AMEND DRAWING D2580 REV. C TO ADD D2580-045 ASSEMBLY

D2580-045 IS IDENTICAL TO D2580-041, EXCEPT FOR THE FOLLOWING CHANGES:

- 1) INSTALL CROSS BOLT SPACERS AT LOCATIONS MARKED 'X' ACCORDING TO THE FOLLOWING PROCEDURE.
 - a) DRILL $\varnothing 0.508$ HOLES AT LOCATIONS SHOWN BELOW MARKED 'X'. CHAMFER HOLES $0.030 \times 45^\circ$. NOTE THAT HOLES WILL ALSO HAVE TO BE TRANSFERRED TO THE D2596 WEB AT THE * LOCATIONS. IT IS ACCEPTABLE TO PRE-DRILL THE D2596 WEB IN THESE LOCATIONS BEFORE INSTALLING THE WEB IN THE SKIDTUBE. OPEN HOLES TO $\varnothing 0.63$ AND TOUCH UP WITH ALODINE PER QSI 005 4.1.
 - b) INSERT D2579 CROSS BOLT SPACERS INTO THE HOLES.
 - c) WELD INTO PLACE PER DART QSI 004 AND GRIND FLUSH.
 - d) REMOVE SPILL OVER LEAVING HOLE DIMENSION $\varnothing 0.380$ - $\varnothing 0.390$.
- 2) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION.
- 3) POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 INSTEAD OF WHITE (REF. 4.3.5.1).



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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 42892A

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DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. DSI 9184	REV. A SHEET 1 OF 1
DATE 00.03.29		TITLE ADD SKIDTUBE P/N D205-634-015	SCALE NTS
A	00.03.29	NEW ISSUE	

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-634 REV. B.

REF. CANADIAN STA: SH96-88
US FAA STC: SR00563NY

ADD D205-634-015 INSTALLATION. PARTS LIST IS IDENTICAL
TO PARTS LIST FOR D205-634-011 EXCEPT THAT:
D205-634-045 REPLACES D205-634-041
D2580-045 REPLACES D2580-041

THE DIFFERENCE BETWEEN D205-634-011 (D205-634-041)
AND D205-634-015 (D205-634-045) IS THAT EXTRA
SPACERS HAVE BEEN ADDED AT LOCATIONS MARKED 'X' AND
ASSEMBLY IS PAINTED GREEN.



D205-634-015 (D205-634-045)

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DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN #	DRAWN BY RH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07-06-28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Diagram illustrating the cross-section of a circular beam with four vertical reinforcement bars. The diameter of the beam is 16 inches. The spacing between the bars is 3.500 inches. The distance from the centerline to the center of each bar is 1.750 inches. The bars are labeled 1, 2, 3, and 4 from left to right.

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07-06-28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\frac{1}{4}$

Diagram illustrating the D2855 cap installation on the rear of the engine. The diagram shows a circular engine housing with a central vertical shaft. A D2855 cap is shown being installed onto the shaft. The cap has a central hole for the shaft and a larger outer flange. The flange is secured by two AN960JD10L washers and two AN3-5A bolts. The cap is sealed with SIKAFLEX-241/-291. The diagram also shows a 0.40 inch gap between the cap and the housing. Labels include: DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES), SEAL WITH SIKAFLEX-241/-291, AN3-5A BOLT (1), AN960JD10L WASHER (1) (2 PLACES), D2855 CAP, and 0.40.

5

D2579 SPACER

D2596 WEB (REF)

ALST-1032-130 (REF)
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

37.50
DISTANCE TO AFT END
OF D2596 WEB

3
7

1.750
1.750

ø0.508 (TYP.)
(40 PLACES)

REFER TO DETAIL A

8.750
17.375
26.000
34.188

57.313 (REF)
7 EQUAL SPACES
8.188 PITCH

38.0
91.500
190.0
(D2500-1)



REFER TO DETAIL A

Technical drawing of a road cross-section. The drawing shows a horizontal road surface with a 4% grade indicated by a triangle with the number 4. A vertical curve is shown with a radius of 20.0m. The road width is 11.0m. The distance between the hole and the tangent point is 1.0m. The distance between the hole and the tangent point is 13.4m. The distance between the hole and the tangent point is 32.0 ± 1.0m. The hole diameter is 0.640m.

[illegible]

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DESIGN	
CHECKED	
DATE	07.02.27

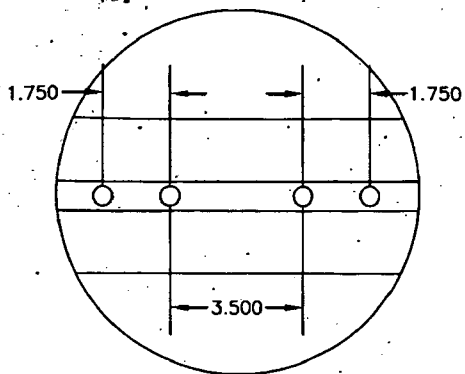
DRAWN BY	PH
APPROVED	H

DART

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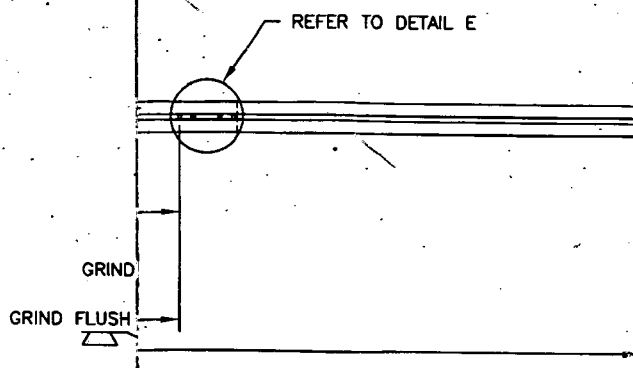
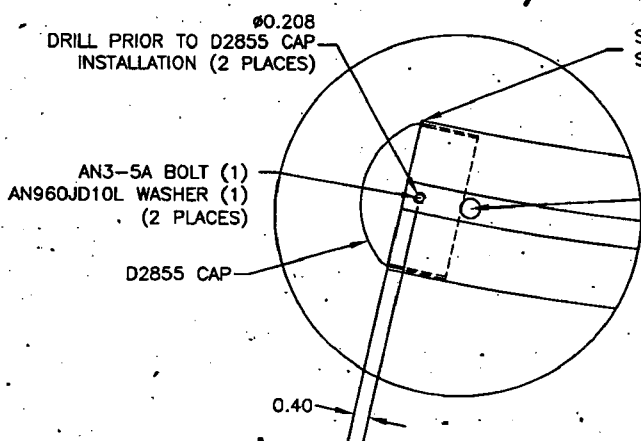
DRAWING NO.	REV. D
D2580	SHEET 2 OF 3
TITLE	SCALE
205 SKIDTUBE ASSEMBLY	1:24

DETAIL E
SCALE 5:24

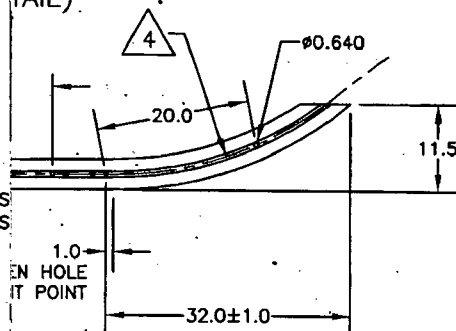


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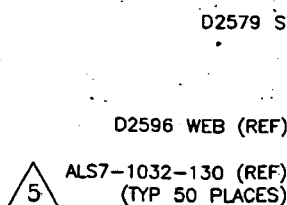
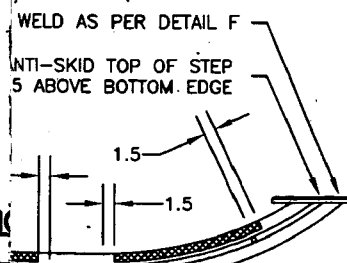
DETAIL G
SCALE 5:24



DETAIL F
(TAIL)



SECTION
SCALE



NO C'BORE
NO PLUG
D3566-13
D3564-13
D3564-9
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D2580-045 NOTES

- FINISH: ACID ETCH, ALODINE PER D2580-045
POWDER COAT ENTIRE ASSEMBLY
BLACK ANTI-SKID PAINT AS PER D2580-045
- IT IS ACCEPTABLE TO GRIND A RELIEF WITH THE SPACER AT THIS LOCATION

DESIGNED BY RH	DART	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
APPROVED H	DRAWING NO. D2580	REV. D SHEET 3 OF 3
	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24

NO. 173

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 41315A0
Part number: D204 635041
Description: 204/205 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

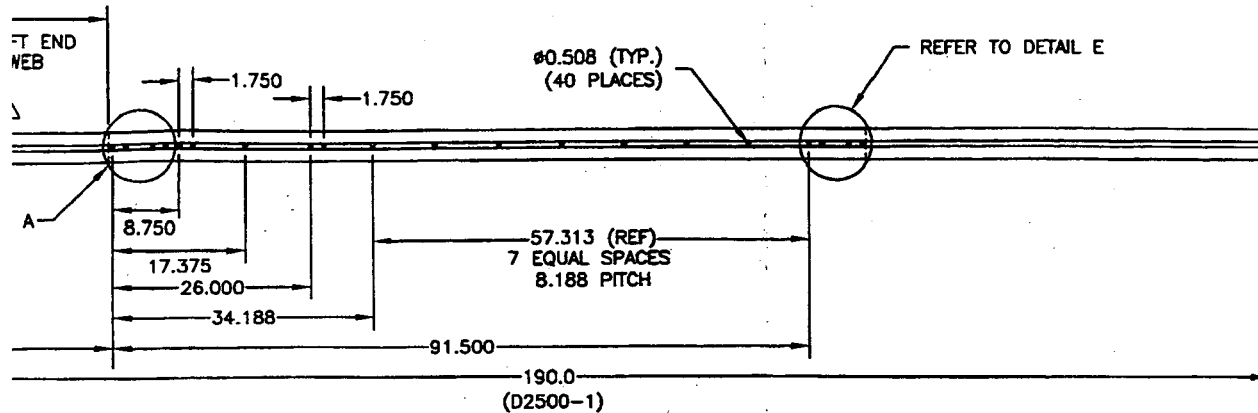
UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

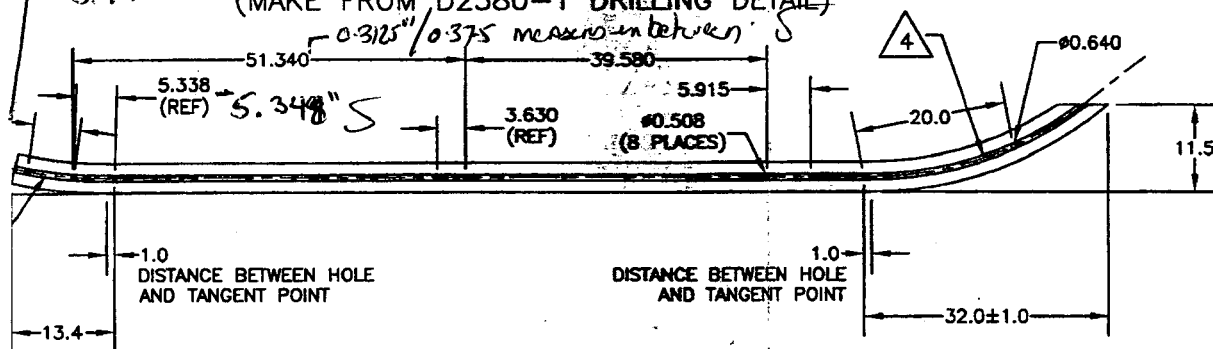
Qualifier Pat Duval Date of Test Coupon 08-09-24
Welder Barclay Elliott Date of Test Coupon 08-09-24

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

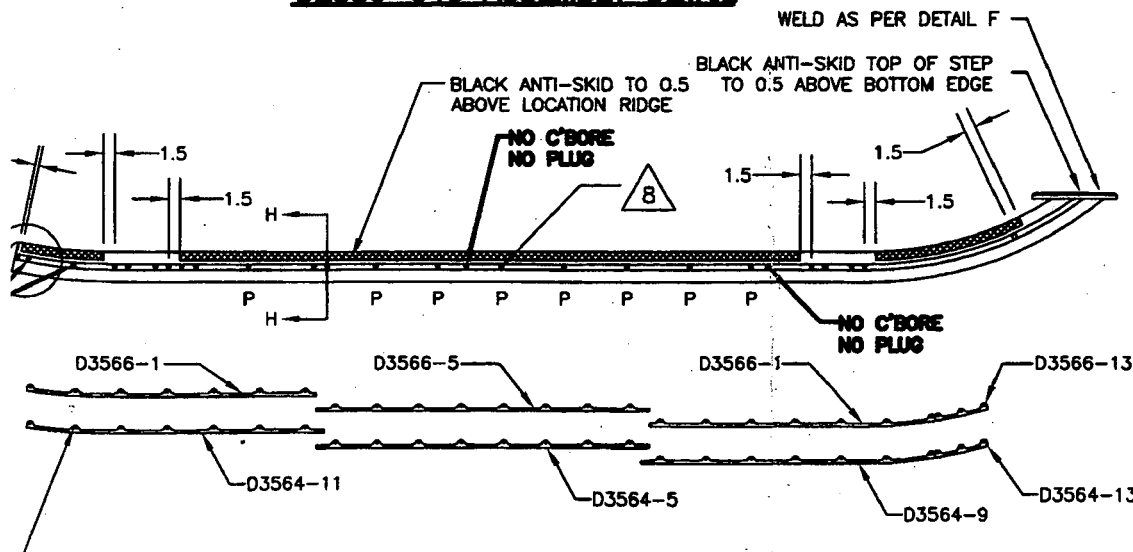
D2580-1 DRILLING DETAIL



D2580-5 BENDING AND CUTTING DETAIL (MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



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REV. D

SHEET 3 OF 3

TITLE

205 SKIDTUBE ASSEMBLY

SCALE

1:24